	Application No.	Applicant(s)
Notice of Allowability	09/823,619	GOODMAN, JOSHUA T.
	Examiner	Art Unit	
	James S. Wozniak	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *2/15/2006*.

2. ☒ The allowed claim(s) is/are *1-44*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

Response to Amendment

1.   In response to the office action from 1/30/2006, the applicant has submitted a request for continued examination, filed 2/15/2006, amending claims 1, 8, 11, 13, 20-21, 27, 33-34, 40, and 44 while arguing to traverse the art rejection based on the amended limitations *(Amendment, Pages12-17)*. In light of the claim amendments, the applicant's arguments, and for the reasons given below, claims 1-44 are allowable over the prior art of record.

EXAMINER'S AMENDMENT

2.   An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Linda Ji *(Reg. No. 49,027)* on 3/21/2006.

3.   The application has been amended as follows:

In claim 20, Lines 4-5 change "determining a list of possible words, and using a language model" to –determining a list of possible words, using a language model, and updating the language model--.

Allowable Subject Matter

4.   **Claims 1-44** are allowable over the prior art of record.

5.   The following is an examiner's statement of reasons for allowance:

With respect to **Claims 1, 21, and 34**, the prior art of record fails to explicitly teach or fairly suggest, either individually or in combination, a method, computer readable medium containing a program, and apparatus for determining an intended input word entered using a numeric keypad, wherein a list of probable words is generated from words within an existing vocabulary and user cache that are consistent with the numeric key input and ranked with respect to a left or right word context using a language model containing probability values corresponding to sequences of word n-grams of a natural language, wherein the language model is updated based on user words entered into a cache.

Although Skiena et al *(U.S. Patent: 5,828,991)* teaches a means for determining a plurality of possible word choices for a text input and using a language rule to rank the possible choices *(Col. 11, Lines 20-47)*, Skiena, as is noted by the applicant *(Amendment, Pages 13-14)*, utilizes a fixed corpus for training the language rule and not user text entered into a cache. Also, as is noted by the applicant *(Amendment, Page 15)*, Skiena also does not teach that the language

rules are language models containing probability values corresponding to sequences of word n-grams in a natural language.

While King et al *(U.S. Patent: 5,953,541)* does teach a temporary vocabulary module (cache) for adding user vocabulary *(Col. 26, Lines 5-49)*, King makes no mention of training language models in such a cache that contain probability values corresponding to sequences of word n-grams in a natural language.

Thus, Claims 1, 21, and 34 are allowable over the prior art of record.

Claims 2-20, 22-26, and 35-44 further limit an allowable independent claim, and thus, are also allowable over the prior art of record.

With respect to **Claim 27**, the prior art of record fails to explicitly teach or fairly suggest, either individually or in combination, a method for determining an intended input word entered using a numeric keypad, as noted above with respect to Claims 1 and 21 in combination with the further steps of smoothing and pruning a language model within a cache to yield a compressed language model.

Claims 28-33 further limit an allowable independent claim, and thus, are also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

Perera et al *(U.S. Patent: 5,974,121)*- teaches a lexical database storing multigram word

sequences and associated probability values, but makes no mention of being able to train such

word sequences based on user data entered into a cache.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632.

The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
3/21/2006

DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 260°